Remarks

Claims 29-42 are pending in the application.

Claims 29-42 are rejected by the Examiner.

The Examiner has objected to Claim 29 re "the memory" in line 12. Applicants have clarified that the references to 'the memory' are to 'the memory on the bridge.' Withdrawal of this objection is requested.

Claims 29, 34, 38 and 42 are rejected under 35 USC 103(a) as being unpatentable over Bronson et al. (US 6,973,528) in view of Yang et al. (US 5,606,665) and DiMambro et al. (US Pub. No. 2004/0177164).

As stated in the office action, Bronson does not teach several elements of the claims. Yang is relied upon to teach all subject matter in the claims with regard to the descriptor data. However, there are several elements of the claims not taught by Yang, Bronson, or the combination thereof.

The combination does not teach fetching the transmit data associated with the descriptor blocks.

Claim 29, for example, requires "searching the memory on the bridge for the descriptor addresses; and if the descriptor addresses are located in the memory on the bridge, fetching the transmit data requested and prefetching any remaining transmit data to match the transmit size."

Bronson teaches prefetching data up to a prefetch byte count from a device to a cache on the bridge, col. 4, lines 58-64. There is not mention of, or any need for, descriptor blocks in Bronson. Yang teaches prefetching the descriptor blocks to a network adapter across a system bus in order to designate the descriptor blocks as having data, then the data is written directly into the system memory buffers, col. 3, lines 15-27; col. 4, lines 5-15.

The combination does not teach a transmit size.

Contrary to statements in the office action, the combination of references does not teach a transmit size. As background, the transmit size is discussed on pages 5 and 7 in Applicants' specification, and present in all the dependent claims 29, 34, 38 and 42. Using the transmit size prevents the bridge from prefetches too much data, and thereby discarding it, as is an issue with the approach taught by Bronson, col. 5, line 8-17. This approach also alleviates a repeat of the prefetch transaction when too little data is prefetched, as is an issue with the approach taught by Yang, col. 4, lines 33-47.

Further with regard to Yang, a misinterpretation appears to exist with regard to the 'data type and length' disclosed at col. 2, line 67. That language refers to the data type and length of the data in a particular buffer, "Each buffer descriptor…also contains information *about the data stored in the associated data buffer*…such as the data type and length… [emphasis added]." This differs from the transmit size.

If the transmit size were known, there would be no need for the mechanisms described at col. 4, lines 33-47, in which a determination is made as to whether more descriptors are needed, based upon not having reach the end of the packet. Indeed, in several places, Yang refers to either the end of the buffer or the end of the packet, and to waiting for a software drive to tell it whether it needs more descriptor blocks, indicating that it has no foreknowledge of the size of the packet, which is the transmit size. See, for example, col. 4, lines 49-51; col. 4, 19-22. Therefore, the combination of references does not teach the transmit size.

The combination is invalid.

For a combination of references to be valid, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. In Bronson, there is no motivation to use descriptor rings. No apparent gain would be made in that system in using descriptor rings as disclosed in

Yang. Further, the operation of Bronson would have to be altered to work with descriptor blocks as well as transmit data, another factor indicating that the combination is invalid. With regard to Yang, there is no reason to perform prefetching as in Bronson, as there is only one bus in Yang, not two. This is highlighted by the fact that the descriptors may be stored in the network adapter for status updates, but the transmit data is sent directly out to the network. See col. 3, lines 28-42.

However, in order to further the progress of this application, Applicants have amended the independent claims to more clearly show the use of descriptor blocks across the expansion and system busses.

The presence of DiMambro does not cure the deficiencies of the combination of Yang and Bronson. There is no specific citation made to DiMambro with respect to the claims. Applicants respectfully request that the Examiner provide more indication as to how the DiMambro reference is being relied upon so they can more completely respond.

For these reasons it is therefore submitted that claims 29, 24, 28 and 42, as amended, are patentably distinguishable over the prior art.

Claims 30, 31, 35, 36, 39 and 40 are rejected under 35 USC 103(a) as being unpatentable over Bronson in view Yang and DiMambro as applied to Claim 29 (hereinafter BYD) and further in view of Berry et al. (US 6,766,511).

The addition of Berry does not overcome the deficiencies of the BYD combination as set forth in detail above with regard to the independent claims from which these claims depend. It is therefore submitted that these claims are patentably distinguishable over the prior art and allowance of these claims is requested.

Claims 32, 37 and 41 are rejected under 35 USC 103(a) as being unpatentable over BYD in view of Schumann et al. (US 6,012,106).

The addition of Schumann does not overcome the deficiencies of the BYD combination as set forth in detail above with regard to the independent claims from which these claims

depend. It is therefore submitted that these claims are patentably distinguishable over the prior

art and allowance of these claims is requested.

Claim 33 is rejected under 35 USC 103(a) as being unpatentable over BYD in view of
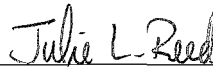
Ong (US 5,815,662).

The addition of Ong does not overcome the deficiencies of the BYD combination as set

forth in detail above with regard to the independent claims from which these claims depend. It is

therefore submitted that these claims are patentably distinguishable over the prior art and

allowance of these claims is requested.

No new matter has been added by this amendment. The prior art cited but not relied upon

has been reviewed and is not considered pertinent to the Applicant's invention as claimed.

Allowance of all claims is requested. The Examiner is encouraged to telephone the undersigned

at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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